

## EXECUTIVE SUMMARY

---

The Step 1 and 2 Screening Risk Assessment (SRA) evaluates potential for risk for concentrations of Chemicals of Potential Concern (COPCs) measured in sediments and a variety of wild-caught aquatic organisms (i.e., composite benthic macroinfauna, epibenthic crabs, tilapia, and bandtail goatfish) collected from Pearl Harbor. The SRA is intended to comply with the U.S. Environmental Protection Agency (USEPA) guidance for Steps 1 and 2 of the 8-Step Ecological Risk Assessment Guidance for Superfund (USEPA 1997) and Tier 1 of the U.S. Navy (USN) Policy for Conducting Ecological Risk Assessment (USN 1999).

Designations of COPCs as potential risk-associated agents are assessed with three lines of evidence.

- Sediment Quality Benchmarks (SQB) – Comparison of maximum COPC concentrations in sediments throughout the harbor to available SQBs (i.e., NOAA ER-Ls).
- Sediment Toxicity – Identification of statistically significant relationships involving increasing COPC concentrations with decreasing amphipod survival (whole sediment) or echinoderm fertilization (sediment pore water) for sediments throughout the harbor.
- Bioaccumulation – Identification of bioaccumulation Hazard Quotients (HQs) (individual COPCs) or Hazard Indices (HIs; COPC groupings, e.g., tPCBs) greater than 1 for any aquatic receptor (composite benthic macroinfauna, epibenthic crabs, tilapia, or bandtail goatfish) or bird receptor (waterbirds represented by the Hawaiian stilt, Hawaiian coot, Hawaiian duck, Hawaiian moorhen, and black-crowned night heron; shorebirds represented by the wandering tattler; and piscivorous seabirds represented by the sooty tern).

Final results based on all lines of evidence indicate that all initial COPCs are carried forward to the Baseline Ecological Risk Assessment (BERA) because there is a potential for adverse ecological affects or no decision regarding risk can be determined due to data gaps. The fact that all initial COPCs continue to be designated as COPCs or are carried forward as data gaps from the SRA to the BERA is not intended to infer final risk. Rather, estimates for final risk for COPCs will be developed in the subsequent BERA beginning with USEPA Steps 3 and 4 and U.S. Navy Tier 2 Steps 3b and 4.